

Title (en)

PRODUCTION OF HIGH PURITY ORGANIC LACTIC ACID AND ITS SALTS AND VARIOUS APPLICATIONS THEREOF

Title (de)

HERSTELLUNG VON HOCHREINER ORGANISCHER MILCHSÄURE UND DEREN SALZEN UND VERSCHIEDENE ANWENDUNGEN DAVON

Title (fr)

PRODUCTION D'ACIDE LACTIQUE ORGANIQUE DE HAUTE PURETÉ ET DE SES SELS ET DIVERSES APPLICATIONS CORRESPONDANTES

Publication

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Application

**EP 20844224 A 20200610**

Priority

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Abstract (en)

[origin: WO2021014460A1] The present invention relates to a novel, time and cost effective, commercially viable and environmentally safe fermentative production process for "High Purity Organic Lactic acid and its Salts and Various Applications in livestock, food and pharma industry as well as acidifier in aqua culture". A microbial consortium of Lactobacillus plantarum and Lactobacillus delbrueckii cultures with high acid tolerance trait which are developed in-house over a period of one year is used in the fermentation process. Glucose (@ 18-20%), obtained from sweet potato starch, and protein hydrolysate used as the chief sources of carbon and nitrogen, respectively. A novel semi- fed-batch fermentation approach is adopted for maximum lactic acid yield with a purity of 90-92%, which is achieved within 48 hours of fermentation. Following downstream process, the liquid product contained chiefly lactic acid, and small proportions of propionic acid and acetic acid. Further, preparation of calcium, sodium, zinc and potassium salts of lactic acid has been elaborated. The lactic acid and its salts are suited for applications such as organic preservative, livestock nutritional supplement and as active pharmaceutical ingredient as well as acidifier in aqua culture.

IPC 8 full level

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